

CHAPTER	II	Operations
SUBJECT	4	Emergency Medical Services
TOPIC	9	Rapid Glucose Assay Testing

A. INDICATIONS

Instances in which an EMT-Basic is authorized to perform Rapid Glucose Assay Testing using a Glucometer Elite® or Ascensia Elite®:

1. Altered Mental Status (confused)
2. Any seizure patient
3. Hypothermia
4. Behavioral emergencies
5. Patients with a known history of diabetes
6. Patient taking diabetic medications (insulin, glucophage, glypizide, glyburide; etc)
7. Any time a rapid blood glucose assay may improve the treatment of a patient

B. PHYSICAL FINDINGS:

1. Altered mental status without suspected trauma.
2. Combative
3. Skin cold or clammy
4. Elevated heart rate

C. PROCEDURE:

1. Gather equipment: Glucometer/Ascensia Elite®, Glucometer/Ascensia Elite® test strip, alcohol prep pad, lancet, 2x2 gauze pad, tape or Band-Aid.
2. The EMT should observe universal precautions.
3. Select a site in which to obtain a capillary blood sample. An appropriate site would be a finger that is well perfused with blood (finger should be pink and have normal skin temperature).
4. Cleanse the site with alcohol prep pad, and wipe dry with gauze pad. **FINGER TIP SHOULD BE COMPLETELY DRY BEFORE ATTEMPTING TO OBTAIN A BLOOD SAMPLE FOR TESTING.**
5. Once test strip has been placed in the machine, the EMT has 3 minutes in which to test the blood. If the finger stick takes longer than three minutes to obtain, a new test strip must be used.
6. Stick the patient's finger using the lancet. A drop of blood (about half the size of a pea or small bead) should remain on the patient's finger. It may be necessary for the EMT to lower the patient's hand below his/her heart and to apply gentle squeeze or milking motion in order to obtain a droplet of blood large enough for testing.

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7. After sticking the patient's finger, hold the machine (with attached test strip) over the drop of blood until the meter beeps (the beep indicates that the sample was large enough for the monitor to test). Do not use any other source (such as a wound) to obtain a blood sample for testing. The machine should display the blood sugar result within 1 minute.
8. The Glucometer Elite® will provide blood sugar readings between the ranges of 20 mg/dL and 600 mg/dL . If the patient's blood sugar reading is below 20 mg/dL the monitor will indicate this through a message that reads "LO". If the patient's blood sugar is higher than 600 mg/dl the machine will indicate this through a message that reads "HI"
9. When possible, the EMT shall cover the puncture site with a Band-Aid.
10. Anytime this procedure is performed by a Cincinnati Fire Department EMT; he/she shall document the following items on the patient care report
 - Name of the provider who performed the finger stick(s)
 - Time or times in which samples were obtained.
 - Machine reading(s) for EACH finger stick.
 - Equipment malfunctions should also be noted.
11. A blood glucose reading of 60mg/dL or lower, associated with any condition listed under "Physical Findings" constitutes a hypoglycemic event. Proceed to *Altered Mental Status - Diabetic* portion of the Hamilton County Protocol (EMT-Basic version) for guidelines on treatment.
12. An optimal post-glucose finger stick should yield a result of 100mg/dl or above within ten minutes.
13. Patients on oral hypoglycemic medications (such as glypizide and glyburide) require transport to the hospital regardless of their response to field treatment. Patients who have recovered from hypoglycemia with the assistance of EMT-Basics or paramedics may wish to refuse transportation to the hospital. The EMT-Basic should NOT obtain a refusal from any patient who has been evaluated or treated for a diabetic emergency. A Cincinnati Fire Department Paramedic must be present to complete the diabetic refusal paperwork. In the event that a Cincinnati Fire Department Paramedic will not be available for an undetermined period of time, the officer in charge shall contact medical control (University 513-584-2655) for assistance. Any direction provided by medical control shall be included in the patient care report, along with the telemetry physician's name or physician number.

Notes:

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1. *This protocol serves as physician authorization for EMT-Basics to obtain finger stick glucose readings. This protocol meets the guidelines published in the Ohio Administrative Code 4765-15-04 (EMT-Basic Scope of Practice).*
2. *Glucometer Elite/Ascensia Elite® monitors require routine testing and maintenance. Documentation of glucometer testing should be maintained on station for a period of no less than 5 years. The manufacturers testing/ maintenance guidelines and a sample check sheet are attached with this protocol.*
3. *EMTs shall review this protocol a regular basis.*
4. *The ability of an EMT to obtain blood glucose readings should NOT delay or supercede the request for Advanced Life Support, or transportation to the Hospital.*